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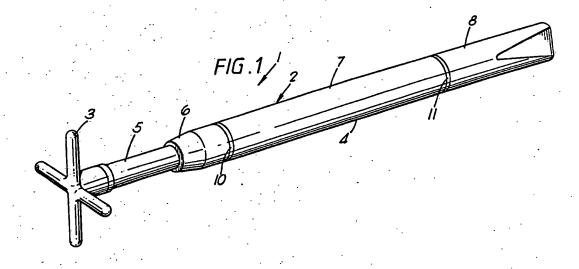
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(56) Documents cited GB A 2180458 **GB A 2177607** GB A 2174611 GB 0326459 EP A2 0217556 US 3740034

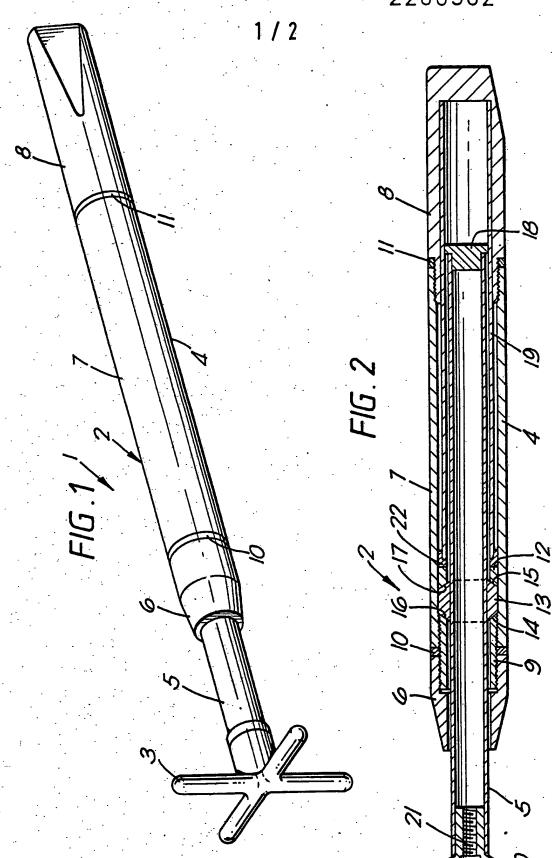
(58) Field of search A6H Selected US specifications from IPC sub-class A63D

## (54) Rest

(57) A rest 1 comprising a head 3 mounted on a shaft 2 the length of which is infinitely adjustable between two extreme positions and which can be secured at any adjusted position thereby enabling the length of the rest 1 to be adapted for different shots.

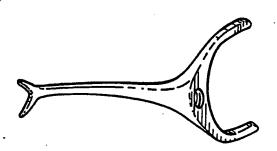


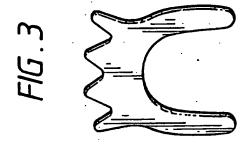
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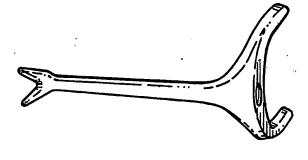


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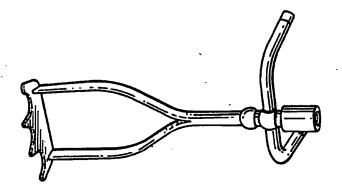












01 REST

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This invention relates to rests such as are used in snooker, pool, billiards and the like games where a cue is used to strike a cue ball against an object ball.

For most shots, the player holds the butt end of the cue with one hand and supports and guides the tip end of the cue with the other hand.

For certain shots, however, the player is precluded from using the other hand to support and guide the tip end of the cue, for example when cueing over one or more object balls and/or where the cue ball is out of reach, and in such cases a rest having a head to support and guide the tip end of the cue is employed.

In the known rests the head is mounted on a shaft of fixed length by means of which the player manoeuvres the head into the required position for supporting and guiding the tip end of the cue for the shot to be played.

A disadvantage of such construction is that the reach is limited by the length of the shaft and that different shots require different heads so that a number of rests having shafts of different length and/or different heads are necessary to enable the player to select the rest most appropriate for any particular shot.

It is an object of the present invention to provide a rest which mitigates this disadvantage.

According to the present invention we provide a rest comprising a head mounted on a shaft the length of which is telescopically adjustable.

By virtue of the telescopic adjustment of the shaft, the invented rest can be adapted for shots requiring different reaches enabling the rest to be used for a range of shots where previously several rests may have been required.

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Advantageously the head is detachably mounted on the shaft. In this way the rest can be adapted for shots requiring different heads by selecting and mounting the appropriate head on the shaft.

Preferably the shaft comprises an outer part and an inner part slidably received in the outer part and means for frictionally holding the parts in any adjusted position. In this way the length of the shaft is infinitely adjustable between two extreme positions corresponding to the maximum and minimum shaft lengths.

The friction means preferably comprises a bush or collet disposed within the outer part and through which the inner part extends with means for controlling radial movement of the bush or collet to restrain frictionally relative sliding movement of the two parts.

Advantageously the control means comprises two relatively rotatable sections of the shaft.

In a preferred construction, the two sections are provided by the outer part and the bush or collet is located between a fixed ring and a thrust ring movable towards and away from the fixed ring on rotation of one section relative to the other in opposed senses for frictionally holding and releasing the inner part.

The invention will now be described in more detail, by way of example only, with reference to the accompanying drawings, wherein:

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o1 FIGURE 1 is a perspective view of a rest according to the present invention;

FIGURE 2 is a longitudinal section through the shaft of the rest shown in Figure 1; and

FIGURE 3 are perspective views of alternative rest heads for use with the shaft shown in Figures 1 and 2.

Referring to Figures 1 and 2 of the accompanying drawings, a rest 1 for use in snooker, pool, billiards and the like games where a cue (not shown) is used to strike a cue ball against an object ball is shown comprising a telescopic shaft 2 having a detachable rest head 3 mounted at one end for supporting and guiding the tip end of the cue when playing a shot.

The shaft 2 comprises an outer tube 4 and an inner tube 5 coaxially mounted within the outer tube 4 for sliding movement relative thereto to adjust telescopically the length of the shaft 2 between two extreme positions corresponding to the maximum and minimum lengths of the shaft 2.

The outer tube 4 is split into three sections, a front section 6, a centre section 7 and a rear section 8. The front section 6 and centre section 7 threadably engage respective one ends of an internal connecting ring 9 and the centre section 7 and rear section 8 threadably engage one another. The front section 6 has a resilient annular seal (not shown) to prevent ingress of dirt and adjacent sections 6,7 and 7,8 are separated by respective decorative rings 10,11 flush with the outer surface.

Disposed within the outer tube 4 between the connecting ring 9 and a thrust ring 12 is a tubular plastics bush 13 or collet having oppositely bevelled end faces 14,15 and a plurality of circumferentially

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on spaced slots (not shown) extending axially from each end with the slots from one end alternating with those from the other end.

The thrust ring 12 is a sliding fit within the outer tube 4 and each ring 9,12 has a bevelled end face 16,17 respectively complementary to the opposed end face 14,15 of the bush 13 such that axial movement of the thrust ring 12 towards the connecting ring 9 causes the bush 13 to contract radially.

The inner tube 5 extends through the bush 13 and is closed at the inner end by a plug 18 which is a sliding fit in a tubular sleeve 19 carried by the rear section 8 and at the outer end by a plug 20 having a tapped bore 21 in which a threaded shank (not shown) on the rest head 3 is received.

The free end of the sleeve 19 has an annular collar 22 which is a sliding fit in the centre section 7 and bears against the thrust ring 12 such that axial movement of the thrust ring 12 and hence radial compression of the bush 13 is controlled by rotation of the rear section 8 relative to the centre section 7.

Assembly of the shaft 2 is such that, in the position shown in Figures 1 and 2 in which the rear section 8 and centre section 7 are screwed together, the radial compression of the bush 13 onto the inner tube 5 is such that the inner tube 5 is frictionally held against sliding movement relative to the outer tube 4 thereby fixing the length of the shaft 2.

In order to adjust the length of the shaft 2, the rear section 8 is rotated relative to the centre section 7 to move the collar 22 away from the thrust ring 12 releasing the radial compression of the bush 13

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which expands reducing the frictional hold and permitting sliding movement of the inner tube 5 relative to the outer tube 4 to obtain the desired shaft length whereupon rotation of the rear section 8 in the opposed sense urges the thrust ring 12 towards the connecting ring 9 to contract radially the bush 13 to hold frictionally the inner tube 5 against sliding movement relative to the outer tube 4.

The pitch of the interengaging screw threads of the rear section 8 and centre section 7 is selected such that the above operation only requires a quarter or half turn of the rear section 8 relative to the centre section 7 both to hold and to release the inner tube 5 thereby facilitating quick and easy adjustment of the axial length of the shaft 2.

As will now be appreciated, the present invention provides a rest having a shaft the length of which is infinitely adjustable between two extreme positions and which can be secured at any adjusted position thereby enabling the length of the rest to be adapted for different shots.

It will be understood that the length of the inner and outer tubes and the relative movement therebetween may be selected to provide any desired range of rest lengths.

Additionally the length of the rest may be increased by fitting an extension piece to either end of the telescopic shaft.

Although in the embodiment described the bush is contracted radially onto the inner tube to restrain sliding movement of the inner tube relative to the outer tube, the construction and arrangement could be such that the bush is expanded radially against the

outer tube to prevent sliding movement of the outer tube relative to the inner tube.

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Other modifications within the scope of the invention include changing the rest head for different types of shot. In this way a single shaft may be used with any one of a range of rest heads thereby further increasing the adaptability of the invented rest. Several alternative types of rest head are shown in Figure 3 but it will be understood that these are only examples and that all types of rest head can be used with the telescopic shaft above-described.

## 01 Claims: -

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- 1. A rest comprising a head mounted on a shaft the length of which is telescopically adjustable.
- 2. A rest according to Claim 1 wherein the head is detachably mounted on the shaft.
- 3. A rest according to Claim 1 or Claim 2 wherein the shaft comprises an outer part and an inner part slidably received in the outer part and means for frictionally holding the parts in any adjusted position.
- 4. A rest according to Claim 3 wherein the friction means comprises a bush or collet disposed within the outer part and through which the inner part extends with means for controlling radial movement of the bush or collet to restrain frictionally relative sliding
- 15 movement of the two parts.
  - 5. A rest according to Claim 4 wherein the control means comprises two relatively rotatable sections of the shaft.
- 6. A rest according to Claim 5 wherein the bush or collet is located between a fixed ring and a thrust ring movable towards and away from the fixed ring on rotation of one section relative to the other in opposed senses for frictionally holding and releasing the parts relative to each other.
- 7. A rest according to Claim 6 wherein the two sections are provided by the outer part.
  - 8. A rest according to any one of Claims 5 to 7 wherein relative rotation of the sections in one sense compresses the collet to frictionally engage and secure
- the inner part relative to the outer part and relative rotation of the two sections in the opposed sense releases the frictional engagement permitting axial sliding movement of the inner part relative to the outer part to adjust the length of the shaft.
- 35 9. A rest substantially as hereinbefore described with reference to the accompanying drawings.